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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,420	10/27/2003	Bryan David Haynes	19175	3355

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EXAMINER

DANIELS, MATTHEW J

ART UNIT PAPER NUMBER

1732

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,420

Applicant(s)

HAYNES ET AL.

Examiner

Matthew J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the response filed 26 June 2006, Claims 2, 7, and 8 were amended and Claims 18-27 were cancelled. There are no new claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes (WO 02/052071) in view of Knight (USPN 6365088) and Epstein (USPN 3052009). **As to Claim 1**, Haynes et al teach a process for forming a nonwoven web (abstract) comprising: (a) providing a source of fibers (fig 1 , 12), (b) subjecting said fibers to an electrostatic charge by passing said fibers through an electrostatic unit having a first side and a second side opposed to each other (fig 1, 18 & 22), wherein the electrostatic unit has an array of protrusions on the first side (fig 1, 20), (c) collecting said fibers on a forming surface to form a nonwoven web (fig 1 , 32).

However, Haynes is silent to (b) the second side of the electrostatic unit having an array of protrusions and (c) alternating the electrostatic charge from the first side to the second side and back to the first side.

(b) Knight teaches both the second side of the electrostatic unit having an array of pins in forming a nonwoven web (col 7 lines 3-7& 42-45 & fig 4). Knight et al teach that charge bars

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may include plurality of sets of four pins then he shows an embodiment in figure 4 where two charge bars are that are opposed to each other.

(c) Epstein teaches alternating the electrostatic charge from one side to another and back to the first side (Figs. 7 and 8), and further that the particular placement and arrangement of electrodes is familiar to the ordinary artisan (3:39-44).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Knight and Epstein into that of Haynes to control filament distribution in order to apply an electrostatic charge on a substrate (Knight, col 7 lines 16-19) and in order to provide the ability to vary the crimp to produce greater softness (Epstein, 3:3-6).

Refer to the rejection of claim 1 for dependent claims with limitations involving both sides having an array of protrusions.

As to Claim 2, Haynes et al teach that the electrostatic charge generated between the array of protrusions of the first side and the array of protrusions of the second side and the array of protrusions of the first side and the array of protrusions of the second side are opposed to one another one (fig 1, 22 & 20, also see claim 1 rejection). **As to Claim 3**, Haynes et al teach that the array of protrusions of the first side and the array of protrusions of the second side each comprise an array of pins (fig 1, also see claim 1 rejection). **As to Claim 4**, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, 205, also see claim 1 rejection). **As to Claim 5**, Haynes et al teach that the fibers are provided by a melt spinning process and the fibers are

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substantially continuous fibers (pg 4 lines 25-26). **As to Claim 6**, Haynes et al teach that the continuous fibers are subjected to pneumatic draw force in a fiber draw unit prior to being subjected to the electrostatic charge (pg 4 lines 26-27). **As to Claim 7**, Haynes et al teach deflecting the fibers with a deflecting device prior collecting the fibers on the forming surface (fig 1). **As to Claim 8**, Haynes et al teach that the fibers are substantially continuous fibers provided by melt spinning and are subjected to pneumatic draw force in a fiber draw unit prior to being subjected to said electrostatic charge (pg 4 lines 26-27), the array of protrusions of the first side and the array of protrusions of the second side each comprise an array of pins (fig 1, also see claim 1 rejection), the electrostatic charge is generated between the array of pins of the first side and the array of pins of the second side and the array of pins of the first side and the array of pins of the second side are opposed to one another one (pg 4 line 19, also see claim 1 rejection). **As to Claim 9**, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, 205, also see claim 1 rejection). **As to Claim 10**, Haynes et al teach deflecting the fibers with a deflecting device prior collecting the fibers on the forming surface (fig 1). **As to Claim 11**, Haynes et al teach that the electrostatic charge is generated by a series of at least two separate electrostatic charge fields along a length of the electrostatic unit, each charge field having an array of protrusions on at least one of the first side or the second side of the electrostatic unit (fig 1, 18 & 22, also see claim 1 rejection). **As to Claim 12**, Haynes et al teach everything in claim 12 but do not teach the second side of the electrostatic unit having an array of protrusions. However, Knight teaches both the second side of the electrostatic unit having an array of pins in forming a nonwoven web

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(col 7 lines 3-7 & 42-45 & fig 4). Knight et al teach that charge bars may include plurality of sets of four pins then he shows an embodiment in figure 4 where two charge bars are that are opposed to each other. It would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Knight et al in Haynes et al's method to control filament distribution in order to apply an electrostatic charge on a substrate (col 7 lines 16-19). **As to Claim 13**, Haynes et al teach that a first charge field is generated by the array of pins on the first side of the electrostatic unit and a second charge field is generated by the array of pins on the second side of the electrostatic unit (fig 1, 18 & 22, also see claim 1 rejection). **As to Claim 14**, Haynes et al teach that the first electrostatic charge field is generated between a first array of pins on the first side of the electrostatic unit and first array of pins on the second side of the electrostatic unit and a second electrostatic charge field is generated between a second array of pins on the first side of the electrostatic unit and a second array of pins on the second side of the electrostatic unit (fig 1, 18 & 22, also see claim 1 rejection). **As to Claim 15**, Haynes et al teach that the first electrostatic field is generated from a potential on the first side of the electrostatic unit and the second electrostatic field is generated from a potential on second side of the electrostatic unit (fig 1). **As to Claim 16**, Haynes et al teach that the array of pins of the first side and the array of pins of the second side are recessed within a cavity of an insulating material such that the pins essentially do not extend beyond the insulating material (pg 13 lines 10-16, fig 2, 205, also see claim 1 rejection). **As to Claim 17**, Haynes et al teach that the electrical potential is alternated from the protrusions on the first side to the protrusions on the second side and back to the protrusions on the first side (fig 1).

Response to Arguments

3. Applicant's arguments filed 26 June 2006 have been fully considered but they are not persuasive. The arguments appear to be on the grounds that the references do not teach alternating the charge back to the first side. These arguments are believed to be fully addressed by the new rejection over Epstein, who teaches these aspects of Applicant's invention (Figs. 7, 8, 11, 12), and that it is desirable to do so in order to "homogenize crimping dimensions and quality" (1:13-16) and to produce greater softness (3:6-7), and further that the "shaping and arranging of electrodes and electrode systems...is also familiar to any cathode ray engineer." (3:42-44).

The rejections of the dependent claims have not been particularly argued.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 8/1/06



CHRISTINA JOHNSON
PRIMARY EXAMINER

8/3/06